

What is Claimed is:

- SUB A1
1. In a graphics system, a computer-implemented method of rendering a graphic primitive, the graphic primitive having a plurality of sides that define the edge of the primitive, the method comprising:
    - determining a channel value for each of a plurality of vertices of the primitive;
    - selecting a point within the graphic primitive;
    - determining an interpolated channel value for each of two points, each point located on a side of the primitive; and
    - determining a channel value at the selected point by interpolation from the interpolated values.
  2. The method of claim 1, wherein:
    - the determining an interpolated channel value for each of two points step comprises performing linear interpolation using an interpolation engine to determine the interpolated channel values; and
    - the determining a channel value step comprises performing linear interpolation using an interpolation engine to determine the channel value of the selected point within the graphic primitive.
  3. The method of claim 1, wherein:
    - the determining an interpolated channel value for each of two points step comprises performing perspective interpolation using an interpolation engine to determine the interpolated channel values; and the

22 the determining a channel value step comprises performing perspective  
23 interpolation using an interpolation engine to determine the channel value.

24

25 4. The method of claim 1, further comprising:

26 repeating each of the steps in claim 1 for a plurality of points in the  
27 primitive.

28 5. The method of claim 1, wherein the channel value represents color.

29 6. The method of claim 1, wherein the channel value represents luminance.

30 7. The method of claim 1, wherein the channel value represents a texture  
31 coordinate.

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SUB A2 33 8. An electronically-readable medium storing a program for permitting a  
34 computer to perform a method comprising:

35 determining a channel value for each of a plurality of vertices of the  
36 primitive;

37 selecting a point within the graphic primitive;

38 determining an interpolated channel value for each of two points, each  
39 point located on a side of the primitive; and

40 determining a channel value at the selected point by interpolation from  
41 the interpolated values.

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43 9. A method of rendering a graphic primitive, the primitive including a  
44 plurality of edges, the method comprising:  
45 deriving a channel value of a first point on a first edge of the primitive;  
46 deriving a channel value of a second point on a second edge of the  
47 primitive; and  
48 based upon the channel values of the first point and the second point,  
49 determining a channel value for an interior point located within an interior  
50 surrounded by the edges of the primitive.

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52 10. The method of claim 9 wherein the step of determining the channel value  
53 of the first point comprises:  
54 determining the channel values of end points of the first edge to  
55 determine the channel value of the first point.

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57 11. The method of claim 9 wherein the step of determining the channel value  
58 of the second point comprises:  
59 determining the channel values of end points of the second edge to  
60 determine the channel value of the second point.

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62 12. The method of claim 9 further comprising:

63 using depth values of the first point and second point to determine a  
64 channel value for the interior point.

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SUB A3 66 13. An electronically-readable medium storing a program for permitting a  
67 computer to perform a method comprising:

68 deriving a channel value of a first point on a first edge of the primitive;

69 deriving a channel value of a second point on a second edge of the  
70 primitive; and

71 based upon the channel values of the first point and the second point,  
72 determining a channel value for an interior point located within an interior  
73 surrounded by the edges of the primitive.

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75 14. ~~A system for rendering a graphic primitive, the graphic primitive~~  
76 including a plurality of vertices and edges, the system comprising:

77 a plurality of agents configured to receive information related to the  
78 plurality of vertices and generate output signals;

79 an arbiter coupled to the plurality of agents and configured to receive the  
80 output signals and to generate request signals;

81 an interpolation engine configured to receive the request signals and  
82 generate an output ratio signal dependent on at least some of the output signals  
83 from the plurality of agents; and a

84 ~~a router coupled to the interpolation engine and configured to transmit~~  
85 ~~the output ratio signal to an input of at least one of the plurality of agents.~~

SUB A4> 86 15. A system for rendering a graphic primitive in a graphic system, the graphic  
87 primitive having a plurality of sides, the system comprising:

88 a channel value input device configured to determine a channel value for  
89 each of a plurality of vertices of the primitive;

90 a point specifier, coupled to the channel value input device, configured to  
91 select a point within the graphic primitive; and

92 an interpolation engine coupled to the point specifier and to the channel  
93 value input device, configured to determine an interpolated channel value for  
94 each of two points, each point located on a side of the primitive, and configured  
95 to determine a channel value at the selected point by interpolation from the  
96 interpolated values.

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ADD A5>

ADD C4